



Value summary of the Internal Fault Detector (IFD™)

Basic Functions	
<ul style="list-style-type: none"> ▪ Detects and indicates internal transformer faults ▪ Relieves static pressure due to transformer overloads ▪ Enables manual pressure relief via pull ring 	<p>Unique to the IFD</p> <p>Same as standard PRV</p> <p>Same as standard PRV</p>

Benefits of the IFD	Value: Ranges of savings
<p><u>Safety for linemen and the public</u></p> <ul style="list-style-type: none"> ▪ Reduces possibility of reclosing on a faulted transformer and blowing the lid / spilling oil ▪ Reduces the need for climbing poles to troubleshoot blown transformer fuses ▪ Eliminates the practice of closing bay-o-net fuses into faults on pad mounted transformers 	\$thousands - \$Millions per event
<p><u>Environmental</u></p> <ul style="list-style-type: none"> ▪ Reduces the number of oil spills ▪ Reduces the number of transformer fires ▪ Reduces the need for spill mitigation and EPA involvement 	\$1,000 - \$60,000 per event
<p><u>Time Savings</u></p> <ul style="list-style-type: none"> ▪ Faster troubleshooting of 1-ph pole tops (15-45 min.) ▪ Faster troubleshooting of 3-ph overhead banks (1-2 hours) ▪ Faster troubleshooting of pad mounted transformers ▪ Faster re-energization of un-faulted transformers ▪ Enables 1-man crew for troubleshooting ▪ Reduces the need to suit up and prepare the site for bucket trucks and live line work 	<p>\$120 - \$360 per call</p> <p>\$480 - \$960 per call</p>
<p><u>Material savings</u></p> <ul style="list-style-type: none"> ▪ Eliminates blowing fuses unnecessarily ▪ Keeps unfaulted transformers in service ▪ Increases the percentage of transformers that can be repaired vs. scrapped ▪ Reduces damage to other equipment that might be burned or oil contaminated due to re-energizing a faulted transformer 	<p>\$15 - \$30 per fuse</p> <p>\$3,000 - \$4,000 per event</p>
<p><u>System reliability</u></p> <ul style="list-style-type: none"> ▪ Improves SAIDI scores – reduces duration of outages ▪ Improves SAIFI scores – reduces frequency of outages by eliminating instantaneous recloser operations when closing in on a fault 	\$160,000 - \$470,000 per year
<p><u>Customer service / PR</u></p> <ul style="list-style-type: none"> ▪ Improves customer perception and goodwill ▪ Reduces customer claims due to outages on sensitive equipment 	

**Data provided by current IFD users*